Amendments to the Drawings:

The attached sheet of drawings includes changes to Figs. 3 and 4. This sheet, which includes Figs. 3 and 4, replaces the original sheet including Figs. 3 and 4, wherein the legend "Prior Art" has been added.

Attachment: Replacement Sheet

REMARKS

The indication that claims 8 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, is acknowledged and appreciated. However, by the present amendment, clams 8 and 13 have been retained in dependent form at this time since independent claims 1 and 9 patentably distinguish over the prior art of record, as will become clear from the response below.

By the present amendment, the drawing objections and the objections to the specification have been overcome. Specifically, the description, "a member 117" has been added to the specification on page 1 to correctly identify this member shown in Fig. 4 of the originally filed drawings. Second, "organic resin layer 204" and other supporting language has been added to the specification on page 8. This description is consistent with the other previously disclosed organic resin layers (202 and 203) shown in Fig. 5. Third, replacement drawing sheets have been appended to this response clearly showing the "Prior Art" label for Figs. 3 and 4. Fourth, the "biochip 900" has been correctly labeled as such on page 10, to correct the typographical error present in the originally filed specification. Therefore, all the objections to the drawings and specification noted by the Examiner have been overcome. As such, Applicant requests withdrawal of the objections to the drawings and specification at this time.

Regarding the rejections under 35 USC 112, 2nd paragraph, by the present amendment, claims 6 and 11 have been canceled without prejudice or disclaimer of the subject matter thereof. Claims 1, 7 and 12 have been amended to overcome the rejection. Appropriate claims have been amended and added herein to adjust the

clarity and/or focus of applicants claimed invention. That is, such changes are unrelated to any prior art or scope adjustment, and are simply refocused claims in which applicants are presently interested. At entry of this paper, claims 1 - 5, 7 - 10, and 12 – 14 are pending for consideration and examination in the application. New claim 14 has been added, depending from claim 2. Applicants submit that all claims present in this application should be considered to be in compliance with 35 USC 112.

At the outset, applicants submit that the present invention is directed to a stamper comprising a fine concave-convex pattern formed on the surface thereof for forming a fine structure on a substrate using a pressing machine. In particular, the stamper is flexible. In addition, as shown in Fig. 1, merely for illustrative purposes, a buffer (3) representing a cushioning layer is formed on a backside of the stamper opposite to the side thereof on which the concave-convex pattern is formed. A modulus of elasticity of the buffer (3) changes in the stamper depending on an area of the stamper. In other words, a modulus of elasticity of the buffer is different in a first portion overlying a first part of the concave-convex pattern than it is in a second portion overlying a second part of the concave-convex pattern.

By doing this, according to the present invention, it is possible to provide a stamper (1) by which a stamper pattern can be accurately transferred onto an object such as a substrate without being influenced by a distribution of the concave-convex portions on the stamper surface or irregularities of the substrate.

As to the rejection of claims 1 - 7 and 9 - 12 under 35 USC 102(b) as being anticipated by Okazaki et al (US 4,723,903), this rejection is traversed insofar as it is applicable to the present claims and reconsideration and withdrawal of the rejection are respectfully requested.

As to the requirements to support a rejection under 35 USC 103, reference is made to the decision of In re Robertson, 49 USPQ 2d 1949 (Fed. Cir. 1999), wherein the court pointed out that anticipation under 35 U.S.C. §102 requires that each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. As noted by the court, if the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if the element is "inherent" in its disclosure. To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." Moreover, the court pointed out that inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.

Applicants note that each of independent claims 1, 2 and 9 recite the feature of a buffer formed on a side of a stamper opposite to the side where the concave-convex pattern is formed. Claim 1 further recites that the buffer has a first portion overlying a first part of the concave-convex pattern, and second portion overlying a second part of the concave-convex pattern, wherein the first portion and the second portion have different moduli of elasticity. Applicants note that each of the independent claims 2 and 9 recite the feature of the stamper being flexible. Claim 9 further recites a buffer comprising different thicknesses formed on a backside of said stamper opposite to the side thereof on which the concave-convex pattern is formed. Applicants submit that the aforementioned recited features of independent claims 1, 2 and 9 are not disclosed by Okazaki et al in the sense of 35 USC 102.

Okazaki et al teaches a stamper used for manufacturing a high density data recording disk wherein it is possible by the stamper to improve the precision of a concave-convex pattern. Specifically, in Okazaki et al, as shown in Figs. 3(a) to 3(d), different metal layers (5, 6) are laminated on a substrate (1). Utilizing the rate difference of etching the metal layers (5, 6), the depth of concave portions of the pattern is controlled depending on the thickness of the metal layers (5, 6) and the strength of an electron beam (7, 8).

Okazaki et al, neither teaches nor suggests forming a buffer on a backside of the stamper opposite to the side thereof on which the concave-convex pattern is formed, as recited in claims 1, 2 and 9. At best, Okazaki et al suggests forming a layer for damping the stress, between the metal film and the substrate as described in lines 1 - 3 of column 3. However, this layer does not disclose the characteristics of having a first portion overlying a first part of the concave-convex pattern and a second portion overlying a second part of the concave-convex pattern wherein the first portion and the second portion have different moduli of elasticity as recited in amended claim 1. The layer disclosed by Okazaki et al does not overlay the concave-convex pattern opposite to the side thereof on which the concave-convex pattern is formed, nor does the layer extend in a plane and have a different moduli of elasticity at different portions of the plane, as recited in claim 2. Nor does Okazaki et al disclose the buffer having different thicknesses formed on a backside of the stamper opposite to the side thereof or with the concave-convex portion is formed, as recited in independent claim 9.

In applying Okazaki et al to the claimed invention, the Examiner contends on page 6 of the office action that the stamper of Okazaki et al is flexible, with no corresponding reference to where in Okazaki et al this limitation is disclosed or

taught. Applicant asks the Examiner to identify where in the prior art this feature is taught, else the rejection addressing this should be withdrawn.

Further, the Examiner erroneously ascribes the Nickel and Gold layers (25, 29) shown in Figs. 6(a) to 6(f) to be the claimed buffer of the present invention. These layers of Okazaki et al are a part of the concave-convex pattern and a protection layer respectively, which is provided to improve the separation property upon the replication and/or the stability and lifetime of the stamper. Additionally, the pattern layer and protection layer of Okazaki et al are formed on the front side of the substrate. That is, it is formed on the same side of the substrate as the concave-convex pattern. On the contrary, the buffer of the claimed invention is located on the backside of the concave-convex pattern. Therefore, this pattern layer and protection layer, unlike the present invention do not have the purpose of accurately transferring a stamper pattern onto a substrate without being influenced by the distribution of the convex portions on the stamper surface for irregularities of the substrate. The Examiner suggests on pages 6 and 7 of the office action that the buffer has a longitudinal distribution of moduli of elasticity. The Examiner cites the Abstract of Okazaki et al as well as column 1, lines 40 - 50 of Okazaki et al. However, those sections of the disclosure of Okazaki et al are directed to a discussion of prior art processes for forming and utilizing photo-resist in the making of precision undulations of a prior art stamper.

Regarding the limitations of independent claim 9, the Examiner on page 7 states that Figs. 2(c) and 2(d) of Okazaki et al disclose the buffer for the stamper with different thicknesses formed on the backside of the stamper. However, again, the reference of Okazaki et al does not teach or disclose a buffer on the back side of the stamper, the back side being the opposite side of the stamper to which the

concave-convex pattern is formed. Okazaki et al merely discloses a method of forming a stamper with several metal layers and a photoresist layer atop the substrate layer. The layers atop the substrate layer are used to form the concave-convex patterns. Okazaki et al does not disclose a buffer placed on the backside of the stamper having different moduli of elasticity as stated in claims 1 and 2 nor does it disclose a buffer with different thicknesses formed on the backside of the stamper as stated in claim 9.

In view of the above amendments and remarks, applicants submit that all claims present in this application patentably distinguish over the cited art and should now be in condition for allowance. Accordingly, issuance of an action of favorable nature is courteously solicited.

Lastly, a citation of documents under 37 CFR 1.56 is included with this submission to properly make of record two prior art Japanese references discussed in the originally filed disclosure.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 1021.43673X00), and please credit any excess fees to such deposit account.

Respectfully submitted,

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